GrummanWorld

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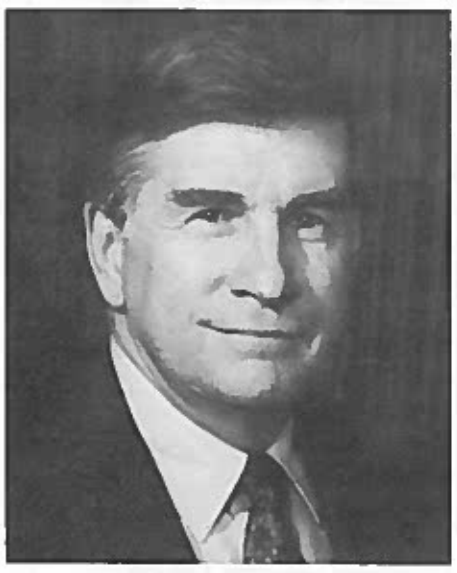
Company Announces Formation Of New Senior Management Team

O'Brien elected president; Bischoff, Freese, Huebner named vice chairmen; they join Bierwirth in recently established Office of the Chairman



John O'Brien

Will Bischoff

Bob Freese

Dan Huebner

The final step in the company's realignment took place August 1, when John O'Brien became Grumman President and three vice chairman joined the newly established Office of the Chairman.

Headed by Chairman Jack Bierwirth, the Office of the Chairman includes O'Brien and three recently elected vice chairmen: Will Bischoff, vice chairman-Technology; Bob Freese, vice chairman-Finance and Treasurer; and Dan Huebner, vice chairman-Development.

"We have positioned a management team to complete implementation of our corporate realignment begun last year," said Bierwirth. "The team's charge is to steer Grumman into the '90s and the next century.

"Our operating divisions have been tailored to match specific markets," added Bierwirth. "Division presidents are accountable for achieving defined growth and profitability goals. The new senior management team will meet the challenges of an increasingly tough business environment that stresses being at the edge of technology while remaining highly competitive."

John O'Brien succeeds George Skurla as Grumman President. Skurla retired July 31 after 42 years with the company.

Elected executive vice president in May, O'Brien has been serving on the board of directors since January. He joined the company in 1954 as a flight test analyst. In 1970, he was elected administrative vice president of Grumman Aerospace. Five years later, he became senior vice president of Administration and Resources. He was named executive vice president of Internal Operations in 1979. From 1983 until May of this year, O'Brien served as president of Grumman Data Systems.

In addition to being vice chairman-Technology, Will Bischoff will retain his responsibilities as senior vice president-Technical Operations for the Aircraft Systems Division.

During the Apollo era in the '60s, Bischoff held numerous management posts on the Lunar Module program. He later became engineering manager for the Space Shuttle Wing program. In 1975, he was named director of design engineering for Grumman Aerospace. Six years later, he was appointed director of Aerospace's Engineering department. In 1983, he was elected vice president and chief engineer; last year he was promoted to senior vice president-Technical Operations.

Bob Freese had been Grumman Corporation's senior vice president-Finance since December 1980.

He joined Grumman in 1956 and was eventually promoted to financial manager in 1965. Following a restructuring of the company in 1969, he was appointed director of Finance for Grumman Aerospace.

Two years later, Freese moved over to Grumman Corporation to become assistant treasurer, and in 1973, he was elected treasurer. The following year, he became a corporate vice president. Freese is a member of the board of directors.

Dan Huebner had been senior vice president of Corporate Development and Marketing.

From 1960 until he joined Grumman in 1981, Huebner held a variety of marketing and development management positions in General Electric. He began his career in Grumman Aerospace as its senior vice president of Marketing and Advanced Technology Development. In September 1984, he assumed the additional responsibilities of senior vice president-Marketing for Grumman Corporation. In January, Huebner became a member of the board of directors.■

Chuck Sewell 1930-1986

On August 4, Grumman Chief Test Pilot Chuck Sewell was killed in a plane crash in Connecticut. A special tribute to Chuck is on page 4.

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Quarterly Report Released

Sales increase 19 percent; backlog rises to $7 billion

Grumman has reported a 23 percent decline in net income on a 19 percent increase in sales for the second quarter ended June 30, 1986.

Quarterly net income was $17.6 million, or 50 cents a share, down from $22.8 million, or 75 cents a share in the year-ago quarter. Earnings for the current quarter include an after-tax gain of $3.4 million, or 11 cents per share, from the previously announced sale of ISI Systems, Inc., a subsidiary of the Data Systems Division. Sales for the 1986 three-month period were $869.4 million, up from $732.5 million a year ago.

For the first six months of 1986, net income was $38 million, or $1.14 a share, on sales of $1.70 billion. Comparable 1985 net income was $50.1 million, or $1.65 a share on sales of $1.49 billion.

The company's backlog continues to grow. As of June 30, it was $7 billion compared to $4.8 billion a year ago.

The principal reason for the decline in net income was a $32.7 million drop in profit, to $42.5 million, for the aerospace business segment in the first half. This was attributed principally to lower contract prices for aircraft. Interest costs increased $7.5 million and research-and-development costs were up $2.7 million.

These costs were offset by a $1.9 million increase in profit for the electronic systems segment, to $3.3 million, and a $12 million increase for the information and other services segment, to $32 million, which includes $7.1 million one-time gain for the sale of the ISI subsidiary.

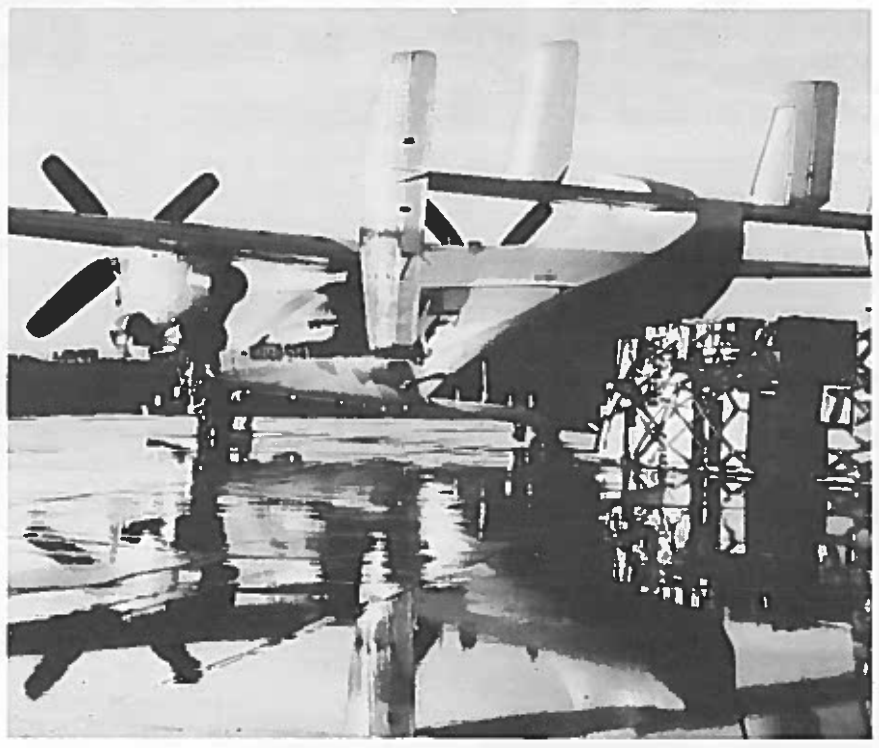
Sales rose mainly on a $155.4 million increase in the F-14D and A-6F development contracts being performed at no profit.

The F-14D and A-6F development programs have been included in the six month 1986 results on a break-even basis as in previous periods. However, in the continued performance of the F-14D and A-6F development programs, the company has encountered certain technical problems which could have a significant impact on program costs and/or schedules, and technical performance achieved thereunder. Recognition of these problems resulted from preliminary tests recently performed on certain critical items of government furnished equipment and from program reviews. Additional testing and review will be required to fully determine the nature and extent of these problems, and possible avenues for their resolution. The potential impact on program costs and associated responsibilities are now being analyzed by the company; there is a disagreement between the company and the Navy with respect to certain of the associated responsibilities. Pending the resolution of these matters, the company is unable to determine if or to what extent there will be any attendant loss.

Grumman Chairman Jack Bierwirth said: "The six months' results were pretty much what we expected. However, the remaining months of the year will contain many difficult challenges. Development programs are generally risky propositions, especially when new systems are being developed on fixed-price contracts. I am optimistic that Grumman and the Navy will be able to work through the problems on the F-14D and A-6F and that new generations of these Navy aircraft will begin service before the end of this decade.

"While there are uncertainties associated with these programs, our backlog shows the solid base of our traditional military aircraft programs and our growing electronics and postal vehicle businesses.

"In light of continuing pressure on earnings, we are increasing our efforts to reduce costs."■



A Dog's Life. *Based at Cubi Point in the Philippines squadron VRC-50 recently received its fifth Reprocured C-2A and officially began carrier onboard deliveries with the new Grumman Greyhounds. Called the 'Foo Dogs,' VRC-50 provide support for carrier operations in the Western Pacific including activities in the Indian Ocean.*

Four Grummanites Promoted By Board

The Grumman board of directors has elected Gus Kinnear senior vice president-Washington Operations; and Dean Cassell vice president-Product Integrity and Environmental Protection.

In addition, Douglas Maki has been elected vice president of Tachonics Corporation, a unit of the Electronics Systems Division, and Vinny DeStefano has been appointed vice president-Bethpage Operations for the Aircraft Systems Division.

During his 37-year naval career which began in 1945, Gus Kinnear flew more different types of jet aircraft in combat than any other naval aviator. He fought in Korea and Vietnam. When the F-14 was introduced to the fleet in the early '70s, he commanded the naval air station at Miramar in San Diego. From 1978 to 1981, he was commander of the naval air force of the U.S. Atlantic Fleet. He also served in numerous high commands during his career.

Kinnear retired as an admiral in September 1982. The following month he joined Grumman International as its vice president of Washington operations. Since 1985 when he was elected vice president-Washington Operations for Grumman Corporation, he has been directing the company's activities with government agencies.

Dean Cassell succeeds Bob Fitzpatrick who retired last month as vice president of Product Integrity and Environmental Protection. He began his Grumman career in 1960 and spent the next 15 years as program manager of the various versions of the E-2 Hawkeye. After two years as assistant to the senior vice president-Aircraft and Space Programs, Cassell was elected vice president-Operations for Grumman Energy Systems.

From 1981-86, he was director of the Grumman Commercial Development Center. From 1985 until earlier this year, he was vice president of Grumman Allied's U.S. Postal Service Program.

Douglas Maki joined Grumman earlier this year to head Tachonics's microwave devices and subsystems effort. Previously he had spent two years at General Electric's electronic laboratory as manager of its monolithic microwave circuits. Maki, who has a Ph.D. in electrical engineering, has also worked in the field of monolithic circuits for Hughes Aircraft at its Torrance Research Center and at Westinghouse's Advanced Technology Laboratory.

Vinny DeStefano retains his responsibilities as head of Manufacturing Operations for Aircraft Systems. From 1974 to 1978, he worked on the F-14 Program in Iran, where he was general manager of Tehran Operations, and later general manager of the Khatami Air Base In Esfahan. During his 27-year career at Grumman, he also served as plant manager of Buildings 7 and 8 at Calverton, and manufacturing manager of the A-6 and F-14 programs.■

Wise Travellers Can Win A Trip

Paula Misa always kept a watchful eye on her travel expenses, but never thought she'd get a weekend trip to the Bahamas out of the deal.

The "deal" is a cost-saving measure run by Grumman's Travel department — the Travel Reservation Incentive Program (TRIP). Business travellers who save on airfare can receive a nice getaway as a bonus.

Misa, a systems programmer for Grumman Data Systems, flew coach to California, even though she was entitled by company rules to fly business class. Her name was entered into the monthly TRIP drawing, and a few weeks later, she discovered she was the May TRIP winner.

In 1985, the program saved Grumman $583,018 in travel costs. Through the end of June, the 1986 savings were $343,181. "That's a great track record for an entirely voluntary program," says Janet Fiore, TRIP administrator.

And Fiore believes there's room for even greater participation. Any Grummanite, anywhere, can participate, once the local Grumman-approved travel agency cooperates with Travel Operations.

The reservationist must inform the traveller of ways to reduce airfare — such as night flights, connecting flights, service class downgrades, or super savers. The traveller who opts for one of those receives one chance for every $100 (or portion thereof) saved and an entry coupon. Secretaries receive one chance per cost saving trip booked.

If you'd like the facts about TRIP, give Fiore a call at Ext. (111) 58612 in Bethpage, or (516) 575-8612.■

NASA Issues New Configuration For Space Station

The race is heating up to build the future Manned Space Station — and NASA recently announced a twin-keel baseline configuration for the Space Station.

The current program schedule calls for the first items to be launched in 1993, with the station useful and inhabitable in 1994.

The Station will have two parallel keels — metal structures that look like radio transmission towers. The earlier reference configuration, the Power Tower, had a single keel. The two keels will be connected at top and bottom by two booms, while a third boom will traverse the structure and have solar panels attached.

In the engineering world, a baseline configuration is a a design to follow — the engineers modify it, flesh it out, before arriving at the final design. But chances are, the final item won't look very different.

NASA has even specified various dimensions for Station parts — for example, passageways will be 12 feet in diameter and the dual keels will be 361 feet long.

A 44-foot-long module will function as a lab, while a same-sized module will be a habitat. There will also be two smaller, 24 foot logistics modules.

"The twin keel design represents an improvement over the original Power Tower," notes Ron McCaffrey, manager of Grumman's Space Station Programs on Work Package 2. "Clustering the pressurized modules about the station's center of gravity provides a better microgravity environment for materials and life science research."

The dual-keel Space Station also provides more usable area for attached payloads and better pointing accuracy due to a stiffer structure.

"The overall size and complexity of this configuration means a number of Shuttle flights will be required to complete assembly in orbit," McCaffrey says. "At least five flights are needed to assemble the structure and install the basic systems.

"The lab and the necessary airlock systems to go with it would be in place after the seventh launch, whereupon man-tended experiments could be conducted," adds McCaffrey. "It could be permanently manned after 12 launches. The station will be complete after 16."

For that reason, NASA may opt to simplify the baseline configuration, so it would take fewer launches to build the Station.

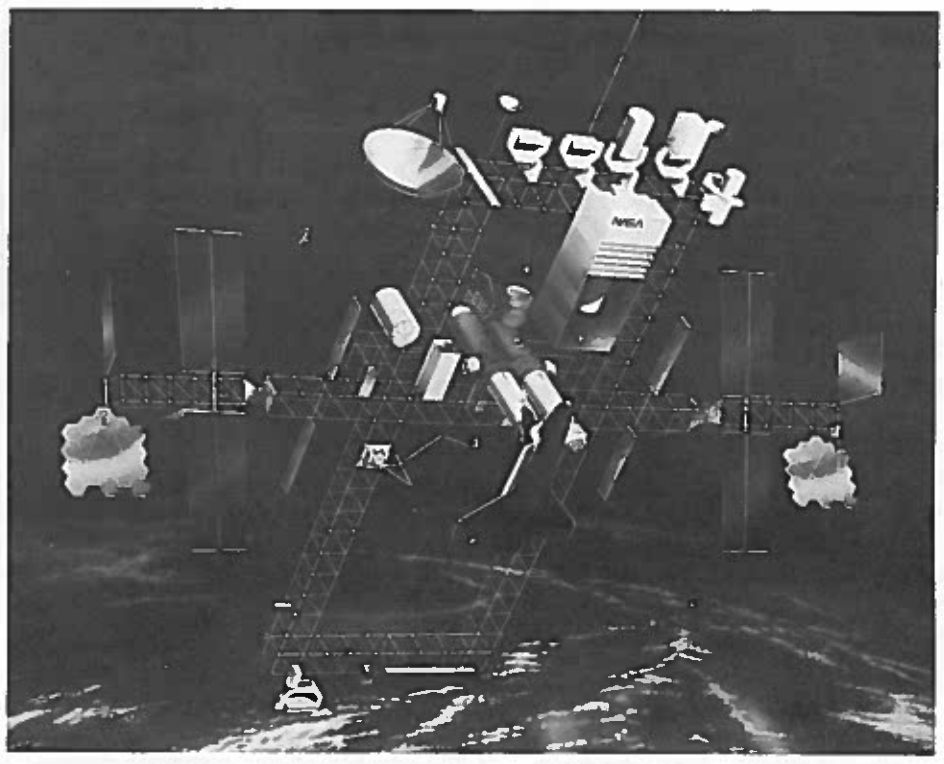
As the work is now broken up, the Space Station studies fall into four work packages. Three of the packages have two contractor teams doing identical study work. The fourth package is being worked on by a single contractor team.

Grumman is a subcontractor to Rockwell International on work package No. 2, and to General Electric for No. 3. It had been a TRW subcontractor on Work Package 4, but TRW dropped out.

Under No. 2, Grumman is working on the Station's central radiation system, which would gather excess heat from all the modules and radiate it into space.

Grumman is also involved with habitat outfitting and extravehicular activity systems.

Grumman's work on No. 3 has included thermal design for free flying platforms, a servicing facility, and attached payloads. NASA is now reevaluating how the work packages are divided up.■



Space Base. *NASA recently unveiled this baseline configuration for the Space Station. It will have two parallel keels connected at top and bottom by two booms, with a third boom crossing the structure. The earlier version, called the Power Tower, had a single keel. The first Station parts should be launched in 1993, with the Station ready for habitation in 1994. (NASA rendering)*

Corporate Smoking Policy Changes In Nassau County

At all Grumman facilities in Nassau County, Long Island, the company's policy on smoking in the workplace will be changing dramatically on November 1, 1986. These changes are necessary in order to comply with the new Nassau County ordinance.

Although the law went into effect February 1, 1986, the county issued waivers to many firms including Grumman to give them time to comply. Grumman will start to enforce the policy on November 1, so that as many smokers as possible will participate in the company-sponsored smoking cessation program that will be offered during this grace period.

"The Nassau County laws are tough," says Bob Bradshaw, Grumman vice president and secretary. "As with any new program, patience and tolerance — from both the smoker and non-smoker — will be needed as the policy goes into effect throughout our buildings in Nassau County. Of course, we hope that there will be fewer smokers by November 1."

Here is the new corporate policy for all Grumman facilities in Nassau County:

- Employees may smoke only in designated smoking areas — and only during break and lunch periods.
- Designated smoking areas will be clearly marked in each facility. (A complete listing will be published in the October issue of the L.I. Supplement.) In larger buildings, smoking areas will be available in the cafeterias. In those facilities without cafeterias, a restroom or some other area will be set aside for smokers.
- Smoking will be permitted in private offices that have floor-to-ceiling walls.

These changes are in addition to the corporate policy on smoking which went into effect October 1984 throughout the company.

Under this corporate-wide policy, the following areas are off limits to smoking: conference rooms, meeting rooms, classrooms, auditoriums, restrooms, libraries, medical facilities, hallways, elevators, computer rooms and areas where smoking is normally prohibited for safety reasons (for example, fuel labs).

All cafeterias, buffeterias, lunchrooms and employee lounges have "no smoking" areas.

In all buildings not located in Nassau County, each Grummanite who works in an office area can designate his working area as a "no smoking" zone. Although the policy addresses itself primarily to the office workplace, any non-smoker who works next to a smoker can ask to be moved. The company will try to honor that request — where practical — by moving either of the Grummanites.■

Do You Want To Kick The Habit?

If you plan to quit smoking, now might be an opportune time. Grumman is once again offering all Grumman smokers a chance to stop smoking via the American Cancer Society's FreshStart program.

New sessions will begin shortly. Designed to help people stop smoking and stay off cigarettes, the program consists of four one-hour, small-group sessions over a two-week period.

Depending on the number of Grummanites who sign up, the sessions will take place on company property after work hours. For every Grummanite who completes the four-session program, Grumman will donate $25 to the American Cancer Society.

If you are interested in participating, fill out the form on this page and mail it to: Quit Smoking, A42-GHQ.

Quit Smoking

Name _____

Mail Stop _____ Plant _____

Work hours _____

Mail to: Quit Smoking, A42-GHQ

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Chief Test Pilot Chuck Sewell Dies In Plane Crash

Grumman chief test pilot Chuck Sewell believed that he was the luckiest guy in the world because people paid him to fly. He was a confident professional; some might say a bit cocky. But as a test pilot, he was the best — a real, modern hero.

On Monday, August 4, Chuck died in a plane crash in Brooklyn, Connecticut. He was ferrying a Grumman TBF-1 Avenger torpedo bomber to Florida.

"Over the years, Grumman has been blessed with some extraordinary test pilots," said Chairman Jack Bierwirth. "But we've never had one that was better than Chuck. His bravery and skill were a source of pride for everyone at Grumman."

"Chuck was a kind man — the first to help if you or your family had a problem," said Pete Tummillo, assistant chief test pilot for Grumman. "He was only greedy in one respect — he wouldn't share his flight time with you. Anything else that was his was yours."

Chuck often said, "I'd rather fly than sit behind the desk. I can't think of anything I'd rather do than fly. You'd cut your best buddy's throat to get a flight."

Chuck personified the "right stuff" of which test pilots are made. His job involved risking his life daily. He loved challenging the textbook methods, pushing a plane to its limits. Yet he had a modest, almost detached air about his accomplishments.

He had logged more than 10,000 hours of flight time on 140 types of aircraft. A highly decorated Marine Corps pilot, he flew 110 missions over Korea and another 220 over Vietnam and Laos. Before retiring from the Corps in 1969 as a lieutenant colonel, Chuck had earned the Legion of Merit, two Distinguished Flying Crosses, 15 air medals, and two Purple Hearts.

In 1969, Chuck was hired by Grumman to be its spin test pilot expert. In spin testing the engines are shut down and the plane falls, sometimes backward, often spinning around its own axis like a leaf. A spin is one of the most precarious and dangerous situations for a pilot. "In a simulator, we can study how a plane will react in certain situations, but we don't have the knowledge of what the plane will do until we actually try it," said Chuck in 1971.

After spin testing, Chuck would write up operational procedures for pilots to follow when their planes go into spins. "I like it; you have to depend on youself — improvise quickly," he said. "It's the ultimate in flight testing. You're always exploring. You're testing in the true, real sense." In his office, there was a poster showing a grizzled old man with long white hair and a long white beard sitting in the cockpit. The caption read "spins take a lot out of you."

It was for his spin testing that he received the test pilot of the year award, the Iven C. Kincheloe Award from the Society of Experimental Test Pilots, in 1973 and again in 1984.

George Skurla flew several times in the back seat of the F-14 with Sewell at the controls. "He made you feel confident that you were in good hands, even when flying the wildest maneuvers," said Skurla. "He contributed so much to the success of our airplanes. Grumman has lost a great friend."

As Grumman's chief test pilot, Chuck directed a staff of 23. When the first test flight of the X-29 came along in 1984, he exercised the privilege of being boss and picked himself. "I looked at the people with experience and I decided objectively I was the best one for the job."

Chuck was in his glory that year. He had just won the Kincheloe award as best test pilot of 1984, and being the pilot of the first X-plane in more than a decade drew a lot of media attention. And Chuck loved it all. He'd spend hours talking to the press, explaining the intricacies of the sophisticated forward-swept wing.

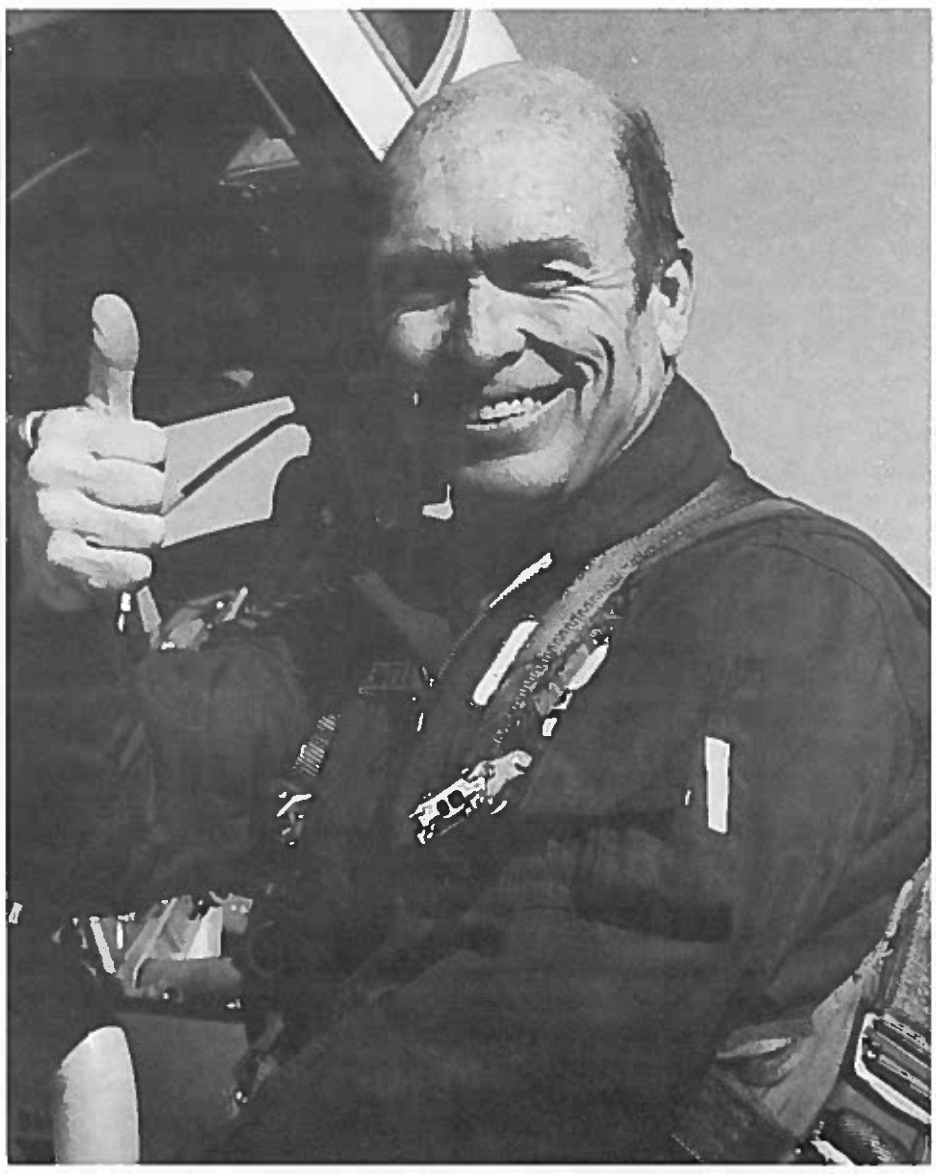
Before the big flight, he said, "I think about the risk, but it's not an overriding factor. I'll confess I'm very concerned at times. The first thought when you're in a hairy situation is 'this can't really be happening to me.' But it disappears, and you revert to your training. It's survival instinct."

Chuck admitted that the adrenaline would be pumping during the first flight. But after the successful maiden flight, he climbed out of the cockpit and gallantly strutted down the flight line.

"It handled better than any airplane that I've ever flown on first flight before," commented Sewell. "Not one flight discrepancy. As far as I'm concerned, we can pump more fuel in the X-29 and I'd fly it again today."

"Chuck was very thorough," says Glenn Spacht, who was X-29 deputy director at that time. "He wanted to be very careful on the X-29 program that we dotted every 'I' and crossed every 'T' in preparing him and the test team for every eventuality.

"We think of today's military planes as high risk aircraft," added Spacht. "But something like the X-29 has been maintained by the best people there are. Even as it flies, 40 people on the ground are monitoring it, and can let the pilot know if something goes wrong. And, the plane has an escape system. So, the risk is actually lower in comparison to simpler aircraft, like the Avenger. It's ironic, sad, and frustrating that he lost his life in what many consider a safe airplane."



Top Test Pilot. *Grumman Chief Test Pilot Chuck Sewell was selected as top test pilot of the year in 1973 and 1984 by the Society of Experimental Test Pilots.*

Chuck's quest for adventure carried over to his hobbies — hang gliding, soaring and scuba diving. He won several blue ribbons for his underwater photography - his most recent prize winner now hangs in corporate headquarters.

He also possessed a great sense of humor. Once when asked to have a photo taken of himself and an award he received, he posed with a "Snoopy's Facts About Planes" book written for children. Another time when a reporter asked him what the Latin motto read on his X-29 patch, Chuck replied, "They tell me it means 'Fortune favors the bold.' But I say it means, 'Fortune favors the bald.'"

Several years ago, Sewell declined the opportunity to apply to the space program. He replied, "No job in the world could compare to being an experimental test pilot."■

The Cockpit Was His Office. *During his flying career, Chuck Sewell logged more than 10,000 hours of flight time on 140 aircraft. His favorite plane to fly was the Super Tomcat.*

'We're A High Technology Company — And High Technology Is Just The Long Way Of Spelling Risk.'

John O'Brien succeeded George Skurla as president of Grumman Corporation on August 1. In an interview with Grumman World, O'Brien talked about his new job, and the opportunities — and problems — the company has in the months ahead.

Grumman World: *What's first on your agenda?*
John O'Brien: Communication. Our new corporate structure is finally in place — and while the reorganization has created many opportunities for us, it has caused a few problems, too. When you have 10 separate autonomous divisions, you have to worry about a tendency to anarchy. That's because some people figure, "I don't have to cooperate with you — I'm only supposed to take care of my own division." But communication among the divisions — and between the divisions and Grumman Corp. — is very important, and we have to do some work on that.

GW: *Do you think it's taking a long time for people to get used to the new structure?*
O'Brien: I read an article the other day that said when you move to a new geographic area there's an acclimation period, and you really shouldn't get upset about the little things — such as finding your way around the new neighborhood, or not being able to find a dry cleaner or your favorite brand of ice cream. Essentially, we had 50 years of being organized one way. And now, new dependencies have to be built, new relationships formed, and that takes time.

GW: *Do you think the reorganization accomplished what it set out to?*
O'Brien: It is definitely well on its way. It enables us to participate in entirely new businesses where we have the capability. The way the technological world has been changing, we had no choice but to restructure. Because I was on the reorganization team, I guess some people would expect me to say that — but I really believe the change was necessary. I think as we get used to living in the new neighborhood, it will naturally start to work better provided we set up the right kind of communication.

GW: *How do you do that?*
O'Brien: It's not going to be easy. My experience in Grumman has been that many people complain that that no one ever tells them anything, that they never know what's going on.

I have always believed in regular meetings and briefings. But 50 percent of the people who complain don't say anything at all to their subordinates about what went on at the meetings they attend. Of the 50 percent who do, half of the people they pass the message on to fail to pass it on to their subordinates.

It proves to me that the ordinary communications that you think work very seldom do. A message seldom gets past the first tier of management, and absolutely will not get past the second and third tier. It can be terribly frustrating.

GW: *What's the answer?*
O'Brien: We're going to set up a real campaign, emphasizing how important it is for people to pass the word — and we'll be talking more about that in the next couple of months. The division presidents have to know where the corporation is headed; they have to tell their vice presidents and directors and department heads where they fit in; everyone has to understand how we'll meet our goals. We need to get 32,000 people moving in the same direction. We need everyone's understanding and support. Our communication with the outside world is also important. It's another area we're going to pay more attention to.

GW: *That's a real concern of yours, isn't it — the badly done presentation, the poorly written memo...*
O'Brien: Of course. It's a reflection of who you are. If you allow a slapped-together presentation with microphones that don't work and material no one can read, it says "I really don't care whether you're in the audience or not." It makes the customer think that you do your work the same way. Careful memos and crisp presentations are important. It's a discipline that carries through the rest of your work.

'If we have a $7 billion backlog, do we really have to hire X thousand more people to produce it? I don't think so.'

GW: *It has been said that Grumman is headed for a couple of tough years before things turn around again. During a time when the Employee Investment Plan match is down and raises are being stretched out, is it difficult to keep people motivated?*
O'Brien: Sure. It's always difficult when you can't give people the things they think they should have. But you have to remember that Grumman must remain competitive to survive. In addition, inflation hasn't been bad lately — and while Grumman isn't at the top of the list in terms of salaries, we're not on the bottom, either. We have to make sure Grumman people understand why the company is having a tough time, and what the problems are.

GW: *Such as...*
O'Brien: Well, we're investing heavily in the A-6F and the F-14D by taking no profit; Joint STARS and BSTS are in development; we're in the second stage of competition for the space station (which may slide, depending on the outcome of the Shuttle problems). We have won the Postal Service vehicle and have to produce at high rates and at a competitive cost. We're pursuing new markets in Data Systems. We're competing in the arenas of electronics systems support equipment, training systems and simulation systems.

In all of these areas, we're stressing our technological capability and our management capability — and at the same time, we're turning out our production aircraft and subcontract products. The opportunities are tremendous — and I believe we're more than capable of doing all of it. But it means long hours for people, a lot of hard work, a lot of smart work. All of our projects are priced very tightly because this is the era of competition.

On top of that, we have pressures on the defense budget that will probably keep a lot of programs up in the air. The country elects a new president in 1988. We have the ever-present problem of LILCO on Long Island — which affects not only work but home. I think when you combine all those things, we're looking at stressful conditions. When you have those situations, you have to pull together so that everyone is carrying a piece of the burden. Part of my job is to make sure we do pull together.

GW: *What do you think of morale?*
O'Brien: I think it's mixed. I'm not happy with what I perceive the morale level to be. A large part of it is a lack of adequate communication — that people can't relate corporate opportunities to personal ones. People want to know, "what's in it for me?" Also, we're obviously trying to cut costs and that's stressful, too.

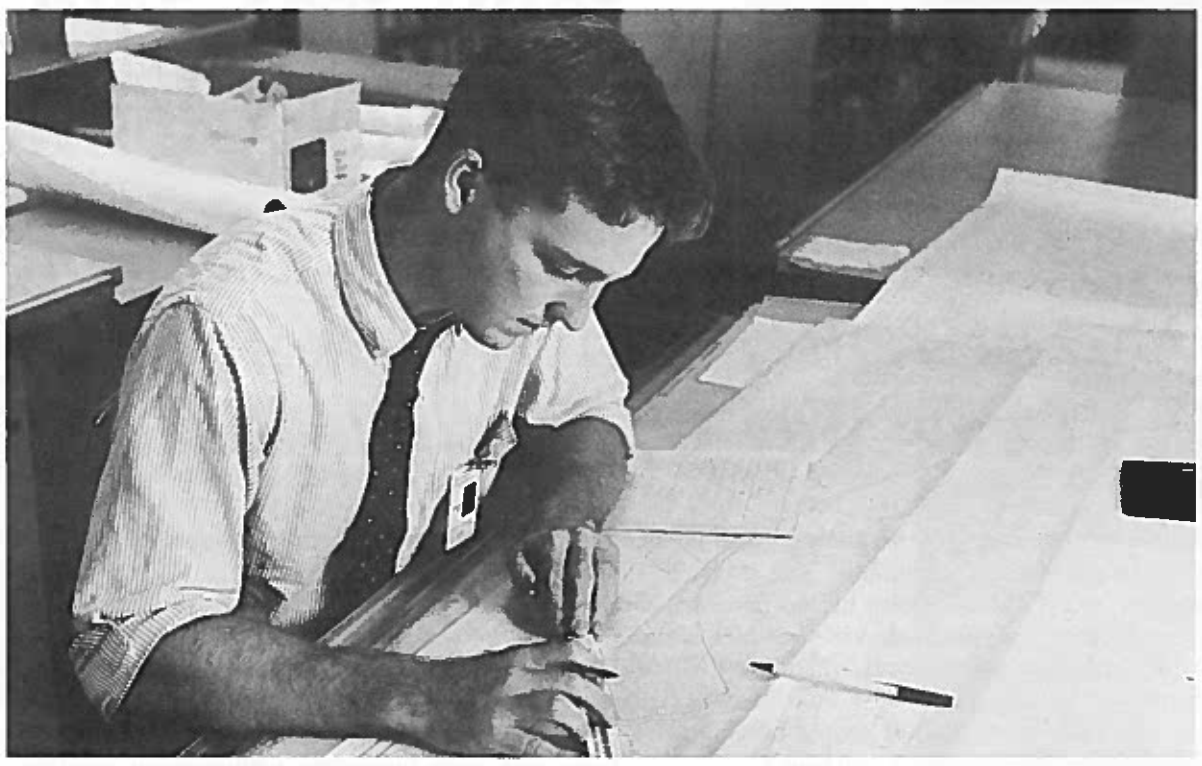
GW: *Could you talk about that?*
O'Brien: I'd rather talk about how we turn out more product with the same number of people. If we have a $7 billion backlog, do we really have to hire X thousand more people to produce it? I don't think so. We're saying to people, why can't you do more than one job? If you take on an extra responsibility, why do you need two more staff assistants? Are we doing things in the most efficient way or because that's how we did it yesterday? That's what I think cost reduction is all about: doing more with less.

GW: *Most of the people in Data Systems have heard you talk about taking risks. Is that still important to you?*
O'Brien: Definitely. I think it's fair to say that our division presidents, program directors and department heads are extremely conservative right now about making risk decisions.

GW: *Why?*
O'Brien: I don't know yet. But I do know that if you examine our history you'll see that we have been successful because we did take risks. When we bid on the Lunar Module, we didn't know exactly how we were going to get to the moon. That's taking a risk. And it's still necessary today because we're a high technology company — and high technology is just the long way to spell risk.

Woodrow Wilson said, "If you want to make enemies, try to change something. You know why it is: to do things today exactly the way you did them yesterday saves thinking." People naturally want to stay with things that are comfortable and familiar. We're asking our management to intentionally rock the boat, and that's a tough assignment.

GW: *How do you create an environment for taking risks?*
O'Brien: By joining with them in taking the risks, being a partner in the decision. By giving them the full credit if the risk turns out to be successful. And by taking the blame for it if it doesn't — because in my new job, that's my responsibility, and I want people to know that's how I work.■



Learning The Ropes. *Christopher Long, a junior technical operations student, is working in the Special Programs Department, Building 9, Melville, for the summer. The University of Virginia aerospace engineering student is helping to analyze the S-2 Turbo Tracker aircraft. (Photo by Rich Breunig)*

A Preview Of Life After College

That extra helping hand that you've grown accustomed to will be missing soon.

School bells will ring after Labor Day for the 750 Grumman Summer Student Employment Program workers. Many of them will return to their college routines with clearer pictures of what's over the horizon.

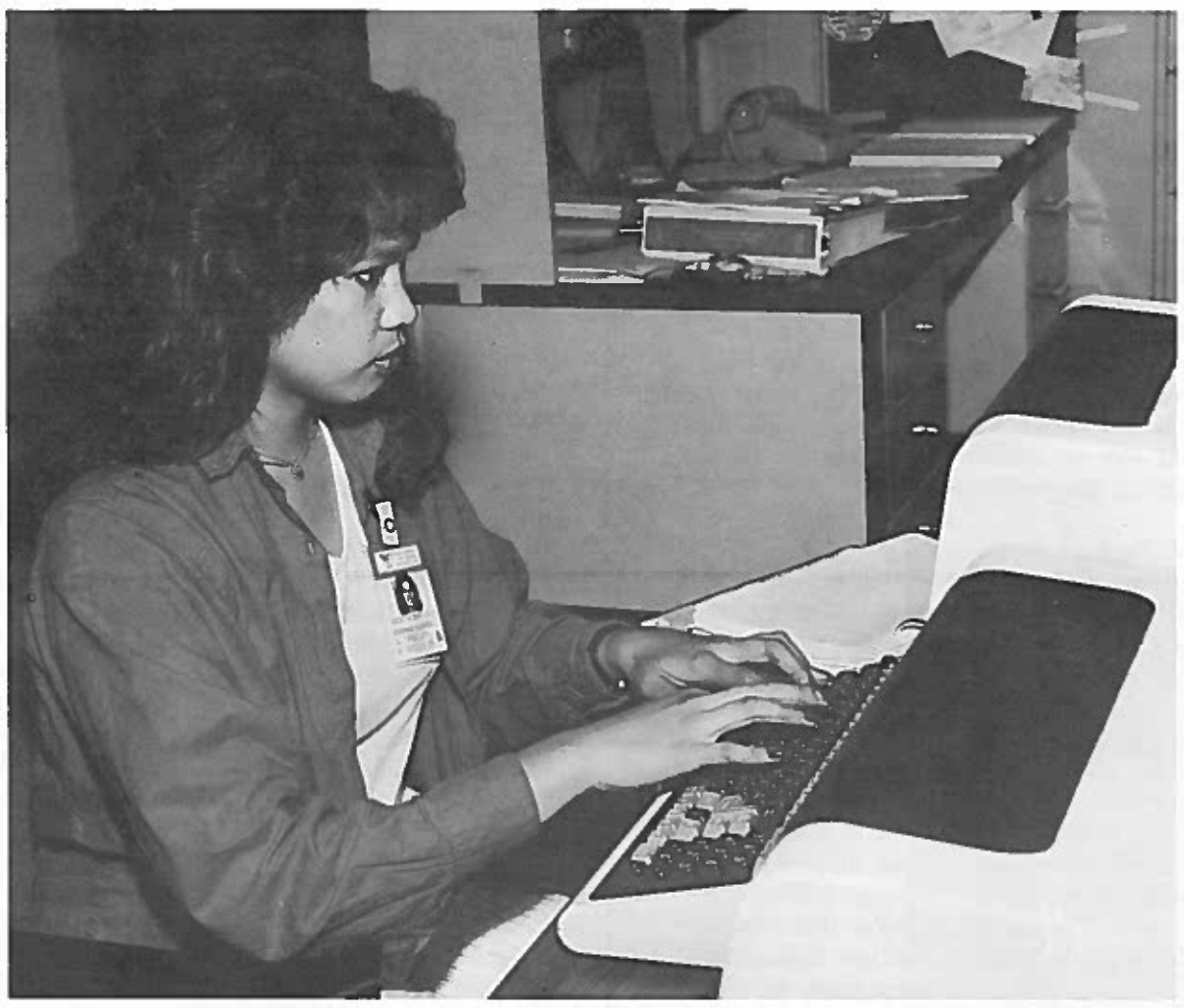
The summer program, which was implemented in the early 1940's, is beneficial to the students as well as Grumman. The students not only learn new skills, but they earn extra money needed for rising college tuition. In addition, the students fill in for vacationing Grummanites and are potential permanent employees to recruit after graduation.

"This year the program ran for 14 weeks, from Memorial Day to Labor Day," says Renee Cox, program manager. The minimum that the student can work is eight weeks.

Other than dependents, there are 62 Grumman scholars and 50 junior technical operations students hired because of their interest in engineering.

Cox says 150 students turned jobs down this year for several reasons, including last minute decisions to attend summer school.

There is a wide variety of summer jobs at Grumman, ranging from landscaper to computer operator. "We try to place the students in jobs that are related to their college studies," Cox says. "But it's impossible to match everyone because there are always more students than specific jobs available."



Rechecking Programs. *Irma Bravo (above), a UCLA electrical engineering student who works in Point Mugu, California, is rechecking computer programs for the F-14 aircraft Strategic Integration Testing System. (Photo by Don Olson)*

Collegians Stack U

Cashier...lifeguard...waiter...gas station attendant. These jobs come to mind when you think of typical summer jobs for college students.

In Grumman's Summer Student Employment Program, jobs range from junior rivetter to secretary to lawn cutter. Positions in the collegians' fields of study are limited. Meghan Kennelly and Pete Wagner lucked out. They work for Corporate Research.

From Labor Day through to Memorial Day each year, hundreds of summer employees fill the gap caused by vacationing Grummanites. This year, 750 summer employees were selected from 1,500 applicants to work at Grumman sites throughout the country.

Kennelly is a senior biology major at Rensselaer Polytechnic Institute, Troy, New York, and this is the second year she has worked in Research's Building 26, Bethpage. She is involved in the Materials for Fusion Reactor Program, which Grumman launched several years ago. The program aims to develop oxidation-resistant, high-temperature materials for a fusion reactor. Nuclear fusion is a new form of energy generation to produce electricity.

Kennelly's task, to help find a way to protect vanadium alloys — a structural material — in a fusion reactor, is a continuation of work she did

'At first I was scared to work in an area that I didn't know too much about.'

last year. "The alloy that we eventually use must be strong and not become brittle under extremely high operating temperatures," Kennelly explains. "In simulation tests, I can determine how vanadium alloys react over periods of time at various temperatures."

In a laboratory, Kennelly conducts oxidation experiments on the vanadium alloy samples, which have protective surface modifications.

Staff scientist Dr. Al Tobin makes conclusions from her analyses and develops new tests. "We are very pleased with the quality and quantity of Meghan's work," says Tobin. "During her first summer here, we spent more time teaching her our research methods and techniques. This year, we're just guiding her along."

"At first I was scared to work in an area that I didn't know too much about," says Kennelly. "But they gave me stacks of background material to read."

Before entering the research world, Kennelly had summer jobs at a Suffolk County park and at a marina concession stand. Her work at

'This job has given me a look at what life will be like after I graduate.'

Grumman helped her obtain a job during the school year as an assistant to a microbiologist — a job she hopes to return to this fall. However, she says she'll miss her summer carpool partner — her father, Ed Kennelly, Bldg. 35 research section head.

"What I've learned has come in handy at college. Plus, this job is paying for part of my tuition," says Kennelly. "It's given me a look at what life will be like after I graduate."

Down the hall, Pete Wagner tests small pieces of aluminum-lithium alloys. He's investigating why the metal develops pores when heat treated. Pores weaken the metal.

Grumman is considering using aluminum-

Credentials During Summer Recess

lithium alloys in F-14 aircraft parts because they are much lighter than the current aluminum alloys.

Wagner, a junior majoring in physics at Harvard University, is a 1984 Grumman Science and Engineering Scholar. His father, Frank Wagner, is an F-14 weapons/special program manager in Building 1.

Last year, Wagner worked on the fusion program. Working with a team of engineers, he conducted structural analyses of the fusion reactor. This year, he's working more independently under senior staff scientist, Dr. John Papazian.

"At this point, he has a firm grasp of what I'm looking for and I hope to have good results

'Working at Grumman is helping to pay for my college tuition...'

by the time he leaves," says Papazian. "If he has any problems, we go over them and try to find the answers."

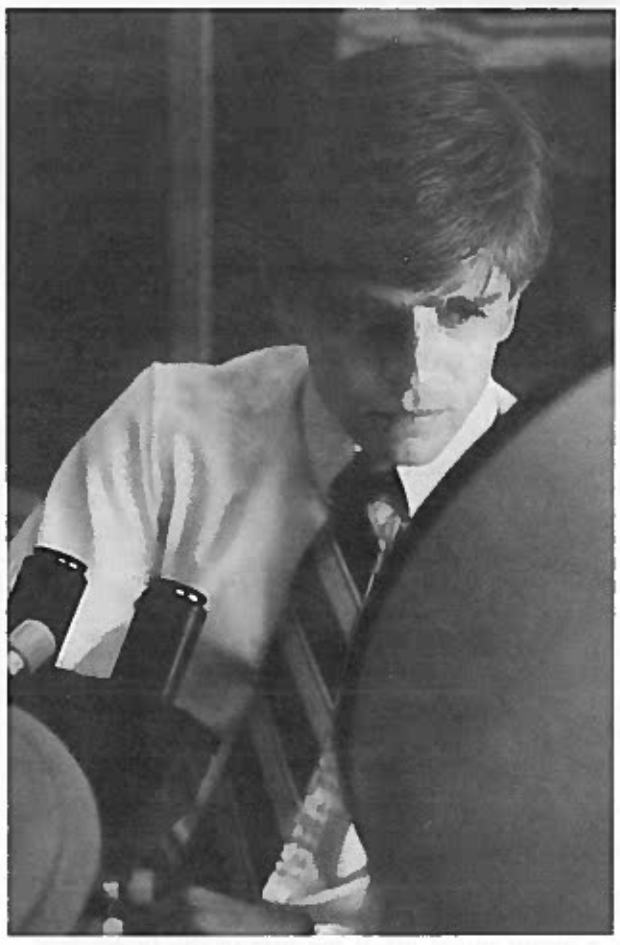
As part of his analysis, Wagner determines whether sample preparation has anything to do with its porosity. He compares aluminum-lithium alloys containing different quantities of copper, magnesium and zirconium.

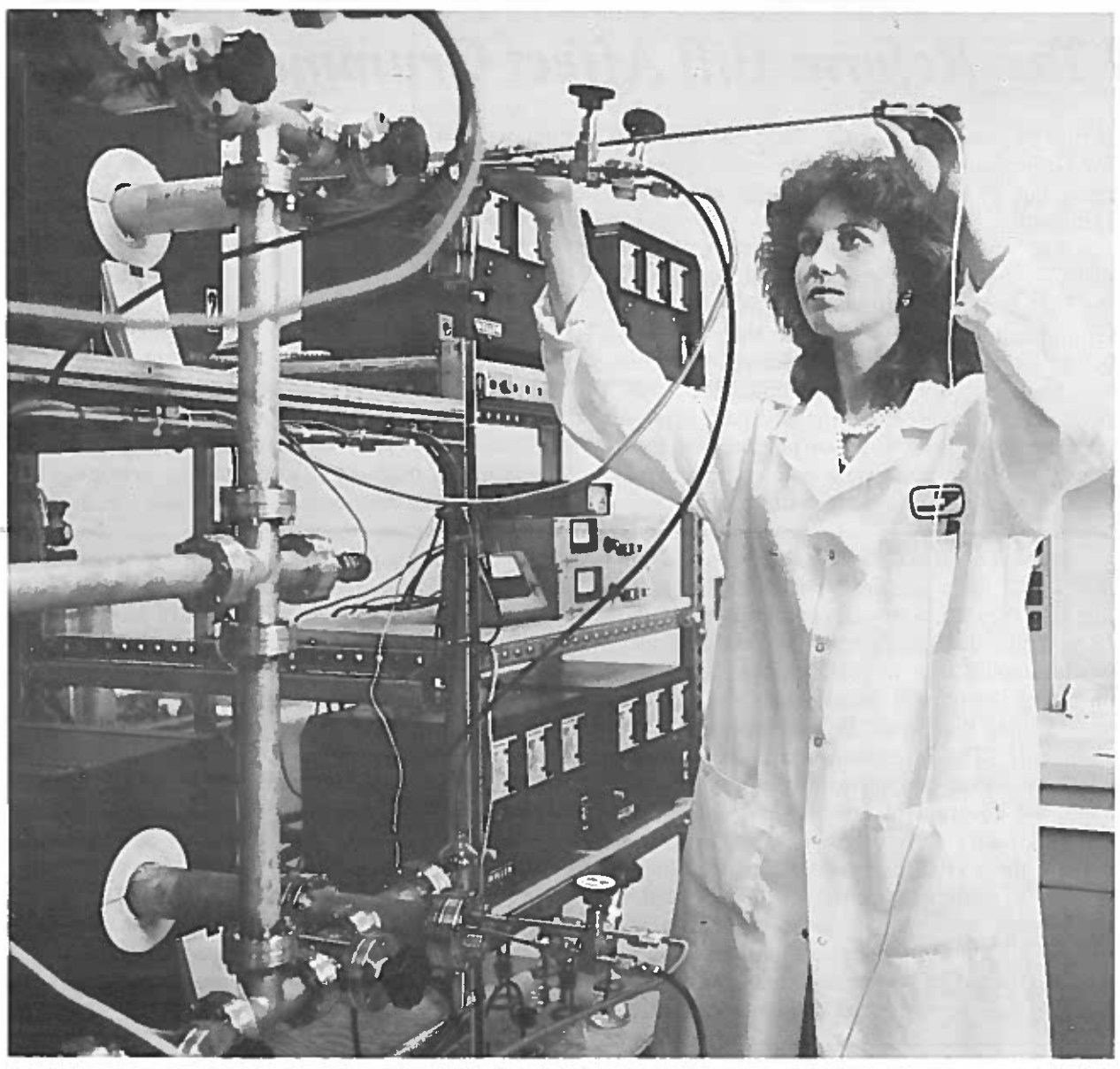
He puts them in a small furnace, setting the temperature at 500°C for 16 hours. "Right now, I'm using only one variable — heat — and I'm hoping to use time as another factor before the summer ends," the young scientist says.

"Working at Grumman is helping to pay for my college tuition, and I'm learning how to get along in an industrial environment," says Wagner. "When I was in high school, I worked as a deli clerk and a sailing coach. I couldn't put those jobs on my resume."

Wagner points out that his Harvard studies are theoretical. Professors know beforehand what each experiment's final outcome will be. At Grumman, he has the chance to work in a lab where hypotheses are being evaluated and no one knows the answers ahead of time.

Wagner says that he is not only learning from Grummanites, but from fellow summer students in Bldg. 26. "We talk a lot about our work at Grumman and our studies at school. What more could you ask from a summer job?"■





Delving Into The Unknown. *A high-powered microscope allows Pete Wagner (above) to get a clearer picture of aluminum lithium alloy samples. He's investigating why the alloys develop pores when heat treated. Another summer employee, Meghan Kennelly (below), inserts a rod lined with vanadium alloy samples into a furnace. She is conducting oxidation experiments for a fusion reactor program. (Photos by Rich Breunig)*

Linda Cook

For Linda Cook, Job Pays Off In Many Ways

Linda Cook enjoys her summer work at Grumman — and Grumman certainly appreciates what she's done.

This fifth-year summer student saved the company $16,539 in 1985 by developing a radome test range computer program for the EA-6B. Cook, who works in Bldg. 66 in Milledgeville, Georgia, received a $450 Project Sterling and a $500 Super Saver award for her ingenuity.

Cook will graduate from the Georgia Institute of Technology in December with a degree in electrical engineering. She is the 1982 winner of the Milledgeville Operations Scholarship.

Last year, the Project Sterling winner worked with radome test facility engineers in Bldg. 66. When new computer software was installed in July, the department realized that it wasn't programmed for all the data analysis required.

"I just started dabbling with the equipment. It took several weeks and a lot of number crunching, but I eventually wrote the program necessary to analyze the test results," Cook says.

A radome houses an antenna system on an aircraft. Each radome must meet minimum test requirements before being shipped to Bethpage. "The testing and the analysis of each radome must be accurate," Cook explains. "If the radome absorbs too much energy when the radar systems are active in the aircraft, the radome will heat up and be destroyed."

In testing, radar frequencies are transmitted from an outside antenna toward the receiving antenna inside the radome. This test indicates how much energy has passed through the radome. These results are then analyzed, using Cook's program.

In her five years as a summer employee, Cook has had a variety of assignments, including doing inventory for Milledgeville's accounting office and working on composite airplane parts in the manufacturing engineering department.

This year, Cook is working on other software improvements for radome analysis. Her work at Grumman has helped her to make career decisions: she was undecided on her engineering concentration when she began college.

"The furthest thing from my mind was to major in electrical engineering," says Cook. "I've come 180 degrees. Working at Grumman made me realize what I was missing."

A Taxing Situation: Business Waits For Final Tax Bill

While the congressional conferees finalize the tax reform bill of 1986, Doug Dahlgard takes his frustration out on the racquetball court after work. As director of Grumman's Corporate Tax Department, it's his job to figure out how much tax money the company will pay and how the new tax structure will affect investments and cash flow over the next few years. It's been a real brainbuster and pounding a rubber ball against a wall helps relieve some of the tension.

"No one knows what the final tax package will be," says Dahlgard. "There is a lot of uncertainty and this causes business to hesitate."

President Ronald Reagan made tax reform his number one domestic issue during his second term. The essence of the tax reform effort is to lower tax rates for individuals and businesses while at the same time do away with certain deductions, tax breaks and preferences. At the heart of the tax reform movement: business will pay a lot more of the country's burden in the future.

Late last year, the House of Representatives passed its version of the tax reform bill; the Senate approved its version this past June. Right now, Senate and House conferees are meeting to iron out the differences. They hope to reach a compromise sometime before Labor Day.

The Senate bill proposes cutting the corporate rate to 33 percent from the present 46 percent; the House bill lowers the corporate rate to 36 percent. And, there are other differences.

"It's almost beyond our capability to put all different pieces of a massive tax package together and figure out the exact results," says Dahlgard. "So, we pick out major parts of the package and see how they would affect Grumman."

Although corporate tax rates would shrink, both bills would repeal the investment tax credit. This is used by many companies to finance capital outlays such as new machinery, equipment, furniture, tools and computers. "We invest quite heavily in upgrading and modernizing our facilities, just to keep us current in technology and manufacturing," says Dahlgard. "If we lose that credit, it's a significant increase in our tax bill."

Doug Dahlgard

On the other hand, both bills extend the research-and-development tax credit which otherwise would have expired at the end of last year. This credit is an incentive for companies to increase their research and development dollars. Grumman is currently investing heavily in major R&D projects, such as the F-14D, A-6F, and Joint STARS.

"The R&D tax credit is incremental — each year you have to spend more than you did in the prior years," says Dahlgard. "If you do, you get a tax break and your tax bill goes down. This credit helps offset the costs of those R&D investments. However, you don't get anything unless you spend."

Dahlgard says that the lowering of the overall corporate tax rate and the extension of the R&D tax credit might offset the loss of the investment tax credit. However, it's too early to call.

On the negative side, the tax bill would force Grumman to change its tax accounting for long term contracts. "Right now, we are using a completed contract method. This allows us to wait until a long-term contract is completed," says Dahlgard. "Then we can determine the profit or loss on that contract and pay a tax."

An aircraft contract is usually five calendar years long. Grumman incurs costs during the first three years. "You get materials together; parts and assemblies are built by subcontractors and at Grumman facilities. During the final years, the planes are completed at Calverton and delivered to the customer," says Dahlgard. "For tax purposes, once the last plane is over the fence, we compute the profit on that contract and pay the tax.

The House bill would require a tax payment during each year of the contract. During the early years, the taxes would be based on an estimate of future profits.

"This would accelerate our tax payments in the early part of our contract," says Dahlgard. "And, in some cases, it's not entirely fair because we are not entitled to bill the federal government for profit until we actually deliver the product. The House proposal would force us to pay a tax before we were able to bill the government for a profit."

The Senate bill would retain the completed contract method of tax accounting. "Although, they proposed some adjustments that would toughen it up a bit," says Dahlgard.

One of the gripes about the present U.S. tax structure is that there are some companies which report financial profits to shareholders but don't pay taxes. An airtight 20 percent minimum tax now being proposed by the Senate would offset that problem. Dahlgard says that Grumman would not be affected by this minimum tax in the immediate future, but some of Grumman's competitors would be.

For now, it's basically a wait-and-see game. Dahlgard is writing a company report listing the guidelines for 1987 — and there are a lot of "what ifs" in the paper. "I'm taking a picture of what I see 1987 will be as far as tax policy, and it's kind of difficult. Things are really up in the air at this point — effective dates and rules. Yet, the company has to know its tax payments — because that affects its cash flow — two, three, five years down the road. By September, hopefully, Congress will have nailed down the new rules."■

How Will Proposed Tax Reform Bill Affect Grummanites?

Facts and opinions about tax reform are getting a lot of media attention. But, what affects will the Tax Reform Bill of 1986 have on the average Grummanite? What impact will the tax bill have on company benefits?

There are several areas of the Employee Investment Plan that might be affected. Over the years, Grumman has worked to liberalize EIP to meet the needs of employees, says Doug Dahlgard, director of Corporate Tax. "It's become a comfortable plan to live with, and it's always attracting new members," says Dahlgard. "You've been permitted to withdraw your plan contributions."

Proposals in the two tax bills would change the order in which the money would come out of the plan. Currently EIP members can withdraw their after-tax contributions to the plan. Now under proposal: taxable earnings and the company match must be withdrawn pro-rata with employee contributions. In short, EIP investors would have to pay tax on these profits when they are withdrawn. "This might be a prospective change only covering contributions made after January 1, 1987," says Dahlgard. "Still, that is a complete reversal of the current IRS stance."

Another proposal would change the present 10-year income averaging to five years. People usually take out their EIP profits when they retire and their income is lower. Using income averaging they can spread their profits over a period of years. "This may come out favorably for Grummanites because of the new, lower tax rates, but it's still too early to tell," says Dahlgard.

The new tax bill might also affect 401k plans — the deferred compensation option of the EIP. Under the company's 401k plan, Grummanites are allowed to put their money — before it's taxed — into the deferred compensation plan. Withdrawals are permited for hardships, such as college tuition, medical expenses not covered by insurance, or purchase of a house. Since no taxes were paid on this money when it went into the plan, withdrawn money is taxed.

However, proposals now under consideration would force people to pay an additional tax just like they do with early withdrawals of their IRAs (Individual Retirement Accounts). This would amount to a 10 or 15 percent penalty tax on top of the normal income tax.

"I think that would be unfortunate," says Dahlgard. "The Investment Plan was established to encourage people to save money. On one hand, the government says that the savings rate for the country is very low. It wants to see it go up. But these changes would make many people hesitant to participate in the EIP — especially the younger employees."

As for the Grumman pension plan, it will not be affected to any great extent. "The changes may be beneficial to the average Grumman retiree collecting a pension," says Dahlgard, "if the overall income tax rate goes down as it's supposed to. Retirees may come out ahead of the game."

How would the average Grummanite be affected by the tax changes? "It's so hard to say," adds Dahlgard. "A lot will probably have to do without the tax break from the IRA deduction, since Grumman has a pension plan. However, the proposal to eliminate IRAs for people with pension plans might be adjusted. Also, the deductions for sales taxes and non-mortgage interest are in jeopardy. So are income averaging, dividend exclusions and miscellaneous job expense deductions.

"On the whole, the average Grummanite is in the middle income group, and both House and Senate bills seem to shift a lot of burden to this segment," says Dahlgard. The Senate bill sets two rates for individual taxes — 15 and 27 percent. The four individual rates in the House bill are 15, 25, 35, and 38 percent.

"Looking at the two proposals now, I feel that the average Grummanites might not do as well as the lower rates seem to indicate," says Dahlgard. "The proposals give more tax relief to the lower income groups and to the upper income groups. This may change; the middle class is beginning to make noise and put pressure on Congress. A lot of people are up for reelection this year — they should listen."■

Arms Needed To Battle Blood Shortage

In 1982, when Dennis McRedmond was director of the Grumman Blood Program, he had no idea that one day he would be getting it rather than giving it.

McRedmond, a 21-year Grummanite and a senior analyst for Business Operations in Grumman Headquarters, underwent triple-bypass surgery in 1985. For many years, while in the service as well as working at Grumman, he had regularly given blood. In 1982, it was his department's turn to manage the Blood Program, and the team developed a five-year plan for gradually boosting blood donations at Grumman.

"It was a very rewarding challenge," recalls McRedmond. "Never in a million years would I have dreamed that not too long thereafter I would be on the receiving end."

The first warning signs came in 1983 and 1984, when McRedmond's brothers both had bypasses. "We've since discovered that we have a hereditary defect," he says. "A liver enzyme, needed to carry away fats, doesn't build up, and clogged arteries result."

McRedmond points out that in the last few years, the Grumman Blood Program has increased donations from 2,000 pints to over 10,000 pints a year. So far, the Grumman Blood Program has collected 7,600 pints in 1986. "That's an excellent record," he says.

Typically, the need for blood becomes a crisis during the summer and early fall. These are traditionally vacation months: when regular donors go away on vacation, blood banks have less of a supply.

This summer, the shortage is especially acute in the New York area because of the publicity concerning Acquired Immune Deficiency Syndrome (AIDS). Donations to New York area blood banks have declined because some people don't understand that it is impossible to contract the disease from donating blood.

Individuals who use AIDS as an excuse for not donating blood confuse giving blood with receiving contaminated blood. No blood from another person enters the donor's body. Sterile harnesses and needles are used, and each is disposed of once the blood is collected. Blood Banks now have a test to identify and screen out donors who have AIDS.

Just one blood donation can help four people in need. Whole blood can go to someone with severe blood loss, while red cells help the surgery patient or accident victim. Platelets help control bleeding for a cancer or leukemia patient. Finally, the donation provides plasma for treatment of burns, shock, or preparation of cryoprecipitate for hemophiliacs.

Since his triple bypass, Dennis McRedmond hasn't been able to donate blood — and he isn't the only donor forced to drop out for health reasons. It's up to other Grummanites to take up the slack.

When you go to donate blood, a nurse will take a medical history and prick your finger to obtain a small blood sample. You'll lie down on a gurney bed, and a nurse will rig up the needle and harness. The needle stings slightly when it is inserted and removed. You must make a fist every 30 seconds or so. For most donors, this part of the process only takes five to seven minutes.

Afterwards, donors can sit for awhile and munch on cookies, donuts, coffee, and orange juice.

If you work off Long Island, chances are, your building has its own blood drives - or makes an arrangement for a Grumman Day at the local blood bank. Long Islanders can call the Blood Program office at Ext. (111) 58920, (516) 575-8920 or 682-8920.■

Walkabout. *In 1982, Dennis McRedmond spent a lot of time convincing others to give blood. In 1985 he had a triple bypass and needed blood. As part of an exercise regimin, he now takes a brisk two-mile lunchtime walk.*

Retirees

On behalf of our fellow workers, *Grumman World* salutes the following Grummanites for their contributions to the company and wishes them well in their retirement. Those who have recently retired are:

Joseph J. Shimmel (40), Edward E. McMullen (43), William E. DeMasters (2), Edward N. Miller (43) John E. Johnson (35), Albert D. Bornschein (2), Robert J. Lawrence (237) Dorothy L. Jackson (44), Concetta Gagliardi (5), Albert V. Savino (20), John J. Carberry (110), Robert J. Morgenweck (31), Vincent Heim (25), Lenora H. Brown (43), George F. Neyssen (6), Alvin C. Olson (14), Steven C. Kern (12), Leo Montner (14), William T. Collins Jr. (6), Joseph Fuori (287), Billie R. Brown (6), Dominic J. DeLuca (GHQ), Richard T. Cruger (6), James A. Turner (43), Michael A. Barone (237), Charles F. Lamarca (25), Gertrude A. Haugwitz (35), Donald B. Weaver (1), Sherrill C. Raynor (6), Robert C. Pollak (47), Edward H. Carlson (30), George Petronio (35), Ann Burnley (15), Roosevelt J. Graham (1), William J. Sieyes (269), Arthur F. McDonald (43), Robert W. Fortner (30), Rafaela DeRosa (15), Richard A. Fritz (5), Lois H. Starrett (30), Robert J. Kobus (6), Evelyn M. McMorris (247), Edward Scerbak (2), Alta L. Laing (5), Henry H. Windhorst (1), Leroy E. VanHousen (294), John W. Wollstadt (30), James H. Abrams (24), Vincent L. Romeo (GAI), John Waters (2), Henry F. Bade (6), John Caroll (2), Winifred M. Dempsey (6), George G. Evans (11), Rino A. Dalcol (43), Peter Beaton (9), Dorothy L. Hecht (14), Mary E. Cheshire (1), Muriel Albers (43), Alfred Mango (7), Frances M. Vitarelli (GHQ), Raymond A. Lokkeberg (1), George E. Slavik (40).

Personals

Our family wishes to express its sincere thanks and appreciation for your kind expressions of sympathy during our time of bereavement.**John, Bob, and Joe Kielbasa**

The family of James O. Evans would like to thank you for your sympathy at a time when it was deeply appreciated. **Evelyn Evans and Family**

My family and I want to thank all my co-workers and ESO for their kind expressions of sympathy during the recent loss of my wife.**Lou Loiacono**

I would like to thank all of you for your prayers, good wishes and gifts while I was in the hospital. It meant a great deal and surely helped me through my confinement.**Abraham Fernando**

The family of Fred H. Softye wishes to express its gratitude for all the expressions of sympathy shown us during a most difficult time. The many visitors and tributes to his memory were most comforting, the final tribute will never be forgotten. **Mrs. Lucy Softye and Family**

My family and I wish to express our sincere thanks and appreciation to all for your thoughtful kindness, caring and sympathy during the recent loss of my wife's brother. God bless you all.**Bill Neuner and Family**

My family and I deeply appreciate the kindness and sympathy shown by all my Grumman friends during the recent illness and loss of my wife Louise.**Bob Damarodas**

I would like to thank my co-workers and ESO for their kind expressions of sympathy during the recent loss of my mother. **Patti Post-Browne**

In recognition of the concern on the loss of my sister Elvira Welle, my family and I express our sincere thanks for all the thoughtfulness shown. The Mercy Hospital Hospice and staff provided the dignity and special care that was needed. Contributions can be made in her name to the Hospice.**Howard Shilling**

Reimbursement Plan Adds GDSI

A career change without going the college route is now an alternative under Grumman's Tuition Reimbursement program.

Tuition Reimbursement now applies to career training courses given by Grumman Data Systems Institute (GDSI). The new policy lets Grummanites take GDSI's accounting, computer-aided design and drafting, computer operations, computer programming, computer service technology, electronics technology, office automation technology and systems analysis programs — and get some or all of their tuition back.

In addition, GDSI will give a tuition discount of up to 15 percent to Grumman employees who enroll in one of the programs.

The amount of reimbursement depends on the courses in each program and the student's final grade in each course. A number of the courses in the accounting and office automation technology programs are not reimbursable.

For an "A" in a course the Tuition Reimbursement program will return 100 percent of the tuition, 85 percent for a "B" and 75 percent for a "C."

However, this program is only available to Grummanites who can attend the day or evening classes at GDSI's Woodbury and Bohemia, Long Island, campuses. It does not apply to GDSI's seminars.

"This program not only will give many Grumman employees a chance to gain more valuable skills but also help develop a better-trained work force for Grumman," says Joelyn Iannone, manager of Career Education and Training.

Once you have been accepted and registered in an approved GDSI program, the tuition reimbursement process is simple. Pick up a tuition reimbursement application and copy of the program rules from any Employee Services Flight Shop. Submit the completed form and a copy of your registration fee receipt to Tuition Reimbursement, C03-GHQ. Then, hit the books.

Beyond training in a specific technical skill, GDSI's programs benefit those who might decide later to go on for college degrees.

"Many of GDSI's courses are worth college credit," states GDSI President George Capua.

The school opened its doors to the Long Island community in 1970 and since then has sent over 10,000 technologists into industry.■

Wanted: Drivers

Volunteers are needed to drive cancer patients to and from hospitals for treatment.

If you wish to donate your time, contact Virginia Trent of the American Cancer Society, 145 Pidgeon Hill Rd., Huntington Station, N.Y. 11746, (516) 385-9119.

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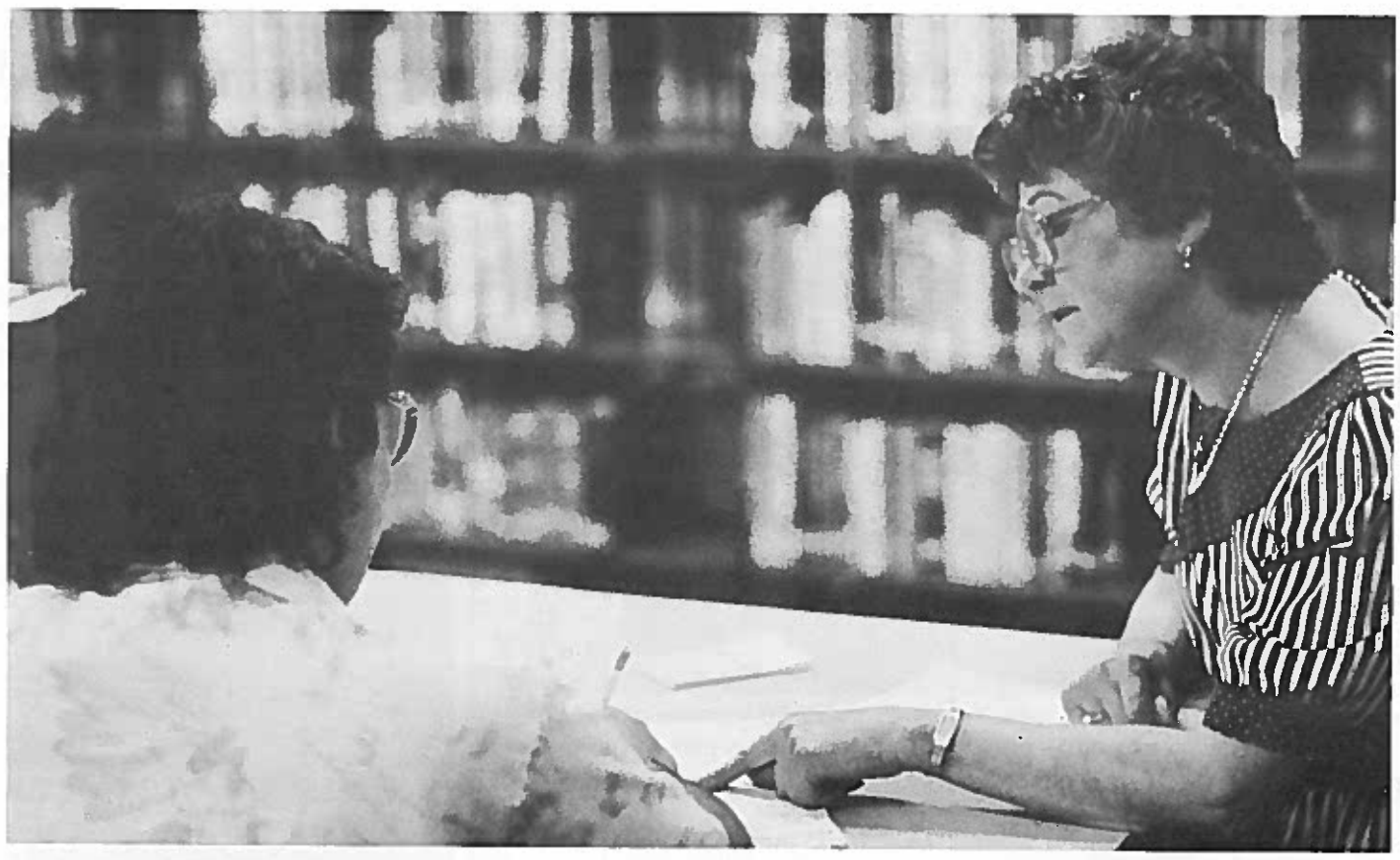

Caring Enough To Help. *Grummanite Norma Aschner (R) teaches Diane (L), who is dyslexic, how to read and write. Aschner is a member of Literacy Volunteers of America, Nassau County, Long Island chapter. (Photo by Bob Sagliocca)*

Volunteers Needed To Combat Illiteracy

If you couldn't read or write, how would you cope with it — and would you seek help? According to the U.S. Census Bureau, between 17 and 21 million Americans are functionally illiterate.

"After years of putting up a facade, it takes a lot of guts for these adults to admit that they can't read or write," says Julia Berkowitz, associate director of Literacy Volunteers of America (LVA), Nassau County, Long Island chapter.

LVA recruits, trains and supports community volunteers to work with adults who are functionally illiterate. For the third year, Grumman is sponsoring a tutor training workshop for employees conducted by the Nassau chapter.

Last fall Grumman recruited 18 tutors on Long Island. In addition, two Grummanites in Stuart, Florida, signed up with the local LVA chapter. Since 1983, 35 Grummanites have tutored students.

"Grummanites have helped meet the needs of students who work during the day," says Anne DuPrey, executive director of the LVA Nassau chapter. "Thanks to Grumman's participation, the nighttime program has grown significantly."

Grummanites who wish to become tutors are invited to an orientation meeting on September 9, in the corporate headquarters auditorium from 5 to 6:30 p.m. The seven workshop sessions will be on Monday and Thursday nights from September 11 through October 6 from 5 to 8 p.m. at the Huntington Library. The site is equally accessible for Nassau and Suffolk County residents.

For the past two years, the LVA Nassau County chapter has held the seven-session program at Bethpage headquarters. Because the sessions will take place off Grumman grounds this year, the spouses of Grumman employees are invited to volunteer. Visitors passes will be issued to spouses at the orientation meeting.

Volunteers do not have to be professional educators to teach the students. A high school diploma, a willingness to help people, and training by an LVA leader are the only prerequisites.

Training includes instruction in the four basic techniques for teaching people to read: language experience, sight words, phonics, and patterned words. In addition, trainees learn how to motivate and test students, plan lessons, and set teaching goals. Throughout the training program, sensitivity to the adult students' special needs is stressed. The majority of the students are between the ages of 22 and 44.

Four volunteers will be assigned to an LVA leader at each session. All must complete homework assignments and pass a final test. Grummanites will then be matched with students close to their homes. Once-a-week tutoring sessions are held at local libraries.

Lessons are tailored to the students' own goals and needs. "The student can stop the lessons at any time," says Sharon Grosser, manager of Grumman Community Support Programs. "This can be as long as five years or as little as 10 weeks. A student may want to learn something specific. For example, if a student wants to pass a road test, the lessons will concentrate on how to read the state manual."

Berkowitz says that many of the illiterate work very hard at hiding their problem. For example, they'll take home forms from work and have someone else fill them out. Or, they'll order what someone else is ordering at a restaurant. "A major objective is for the tutor to teach the student to cope with these everyday events," says Berkowitz.

Six weeks after the training, a follow-up session will be held. "The volunteers tell us about their successes and problems they've had with the students," says Berkowitz. "We try to steer them in the right direction."

The tutors also learn from the experience. "I'm gaining a real sense of involvement and learn more about myself during the lessons," says Norma Aschner, manager of personnel for Quality and Safety Operations, Bldg. 35. "Volunteering as a tutor gives me a wonderful feeling inside and I have made a new friend."

Aschner has been teaching a mildly retarded 28-year-old woman for almost two years. The student never attempted to read because she lacked self-confidence. Aschner is currently teaching her to read newspaper articles and write down what she thinks they mean.

"Nobody takes the time to care for these individuals. Working with them on a one-to-one basis is the best way for them to learn," says Aschner.■

LVA Info

If you are interested in learning more about the Literacy Volunteers of America, call Anne DuPrey at (516) 486-2789 and mention that you are from Grumman, or call Sharon Grosser at Ext. (111) 53254.

Grummanites off Long Island should contact their local chapter of Literacy Volunteers; or write to the national headquarters: 404 Oak Street, Syracuse, N.Y. 13203, (315) 474-7039.

Obituaries

Ernest Borysewicz of ILS Machine Equipment Engineering, Bethpage, Aircraft Systems died July 8 at the age of 61. He had been with the company since 1957 and resided at 11 Alexander Dr., Farmingdale, N.Y.

Brenda J. Raspe of Machine Shop, Glen Arm, Aircraft Systems died June 22 at the age of 46. She had been with the company since 1978 and resided at 200 Parke St., Delta, Pennsylvania.

Frank Franzone of Controls, Bethpage, Aircraft Systems, died July 21 at the age of 64. He had been with the company since 1972 and resided at 68 Ontario Ave., Plainview, N.Y.

Oronzo Giuliano of Parts Paint, Bethpage, Aircraft Systems, died July 21 at the age of 58. He had been with the company since 1983 and resided at 293 Willowood Dr., Wantagh, N.Y.

Robert P. Nestor of ILS Systems Concepts, Melville, Aircraft Systems, died July 26 at the age of 50. He had been with the company since 1958 and resided at 8 Old Town La., Halesite, N.Y.

Elmer Sulander of ILS Systems Concepts, Bethpage, Aircraft Systems, died July 13 at the age of 57. He had been with the company since 1964 and resided at 16 Marlan Ct., Smithtown, N.Y.

David A. Walker of Boeing Major Sub-Assembly, Stuart, Aircraft Systems, died July 14 at the age of 39. He had been with the company since 1980 and resided at B-37 Cardinal Ave., Ft. Pierce, Florida.

Daniel C. Weinstein of ILS Publication Control, Bethpage, Aircraft Systems, died July 20 at the age of 63. He had been with the company since 1966 and resided at 405 Westminster Rd., Brooklyn, N.Y.

Charles A. Wilson of Requirements Planning, Bethpage, Aircraft Systems, died July 30 at the age of 63. He had been with the company since 1965 and resided at 1318 Thompson Dr., Bay Shore, N.Y.

Retiree Obituaries

Sven Abramson of 39 Lenox Ave., Hicksville, N.Y. died July 9, 1986. He retired in 1977.

John H. Argust of 127 Broadway, Amityville, N.Y. died July 18, 1986. He retired in 1977.

John F. Baldyga of 2347 Adolfo Pl., Westbury, N.Y. died June 26, 1986. He retired in 1977.

Frank Cassara of 690 Milligan La., West Islip, N.Y. died July 23, 1986. He retired in 1973.

Darwin F. Crone of 116 Ewelwood Dr., Savannah, Georgia died June 29, 1986. He retired in 1984.

Moses Ebron of 32 Elm Ave., Hempstead, N.Y. died June 18, 1986. He retired in 1965.

James O. Evans of 348 Richard Ave., Hicksville, N.Y. died July 5, 1986. He retired in 1977.

John J. Farrelly of 34 Hobart St., Babylon, N.Y. died June 28, 1986. He retired in 1968.

Bernard E. Heaney of 417 45th St., Lindenhurst, N.Y. died July 16, 1986. He retired in 1974.

Edwin H. Heverly of 149 Queens Ave., North Babylon, N.Y. died June 6, 1986. He retired in 1977.

Chester P. King of 5 Michael Dr., Beverly Hills, Florida died June 30, 1986. He retired in 1974.

William Lenhart of 6677 E. Grayson St., Inverness, Florida died July 18, 1986. He retired in 1973.

Robert J. McCartney of 419-05 Atlantic Ave., East Rockaway, N.Y. died July 8, 1986. He retired in 1975.

Randolph Morse at P.O. Box 214, West Hempstead, N.Y. died July 3, 1986. He retired in 1969.

Thomas P. Piccolo at P.O. Box 441, Aripeka, Florida died July 10, 1986. He retired in 1977.

James P. Reaser of 3712 85th St., Lubbock, Texas died July 14, 1986. He retired in 1977.

William J. Vogel of 12 Central Blvd., Bethpage, N.Y. died July 3, 1986. He retired in 1976.

Service Milestones

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Charles Petri, Prod. Plt. Mgmt., Bethpage, Aircraft Systems
Charles P. Renz, Camera Graphics, Bethpage, Services
William E. Voorhest, Vice President, Bethpage, Services

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George A Drab, Tech. Reqmts., Melville, Aircraft Systems

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Robert E. Amott, Corp. Sec., Bethpage, Services
Henry C. Bell, Specifications, Melville, Aircraft Systems
Anthony J. Bianco, Central Storage & Retrieval, Bethpage, Aircraft Systems
Philip M. Biancone, Fld. Admin./Travel, Bethpage, Aircraft Systems
William Caniano, Plt. 215 Salis. Prod. Suprv., Great River, Electronics Systems
John P. Chacalos, Steel Parts Assembly, Bethpage, Aircraft Systems
Felix S. Cusa, Quality, Stuart, Aircraft Systems
Allan E. Dooley, ILS Commodities Cont., Melville, Aircraft Systems
William Fehrs Jr., Adv. Prog. Mgmt., Bethpage, Aircraft Systems
Robert A. Ford, Sulphuric Acid Anodize, Bethpage, Aircraft Systems
Harry L. Foster, ILS Tech. Svcs., Melville, Aircraft Systems
Arthur R. Garmendia, Facil. & Equip. Plann., Bethpage, Aircraft Systems
William S. Grecz, Tech. Reqmts., Melville, Aircraft Systems
William R. Harwood, Prod. Plt. Mgmt., Bethpage, Aircraft Systems
Hans Kalle Jr., Plt. Matl. Stor. & Distr., Calverton, Aircraft Systems
Fred E. Knapp, Prog. Eng. Mgr., Bethpage, Aircraft Systems
Louis Lupoli, Inst. Test, Bethpage, Aircraft Systems
James McDonald, Assemblies, Bethpage, Aircraft Systems
Arthur F. McDonald, Elect. Final Assy., Great River, Electronics Systems
Lloyd N. Miller, Details, Bethpage, Aircraft Systems
Frank Morosky, Maint. Admin., Bethpage, Services
Francis Nichols, Sub-Assembly, Bethpage, Aircraft Systems
Louis P. Parrella, Aircraft Services, Bethpage, Technical Services
Francis L. Rath, Methods Tool Mgmt., Calverton, Aircraft Systems
Harry L. Roehrig, Prod. Plt. Mgmt., Bethpage, Aircraft Systems
Robert T. Ryan, Tool Fab. Mgmt., Bethpage, Aircraft Systems
Charles W. Schwalbe, Arch. Eng., Bethpage, Services
Earl Seagle, Qual. Admin. Svcs., Milledgeville, Aircraft Systems
Louis Tomeo, Details, Bethpage, Aircraft Systems
Adolph J. Vnook, Mfg. Status, Bethpage, Aircraft Systems
Charles H. Waldeck, Warehouse, Hicksville, Aircraft Systems
Robert W. Washington, Pres./Svcs.—Edit/Illus., Bethpage, Services

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John D. Alber, ILS Prog. Mgmt., Melville, Aircraft Systems
John Berdinka, Airport Ops., Calverton, Aircraft Systems
Herman R. Clark, Qual. Ops. Plann., Bethpage, Aircraft Systems
Robert E. Geisel, Electro/Mech. Des., Melville, Aircraft Systems
Nicholas Hadjigeorgio, Des. Eng. Proj. Mgmt., Bethpage, Aircraft Systems
William L. Horne, Trans. Office, Calverton, Aircraft Systems
Robert Kramisen, ILS Site Reqmts., Bethpage, Aircraft Systems
Lawrence E. Lorentzen, Veh. Liaison, Bethpage, Aircraft Systems
Joan R. Manahan, Bus. Dev., Great River, Electronics Systems
George F. McKendrick, Maint., Calverton, Services
Francis McNally, Aircraft Progs., Calverton, Aircraft Systems

N.A. Beal II

G.A. Burns

L.J. Farrellly

T.S. Gordan

B.S. Green

R. Ibanez

J.F. Jasuta

G.T. Keefe

J.R. Kriklava

R.W. Lamberson

J.J. Morgan

C.F. Motzer

S.J. Pancir Jr.

R.A. Petrucci

G.G. Rooney

H.J. Sheprow

L.L. Sokol

R. Yuen

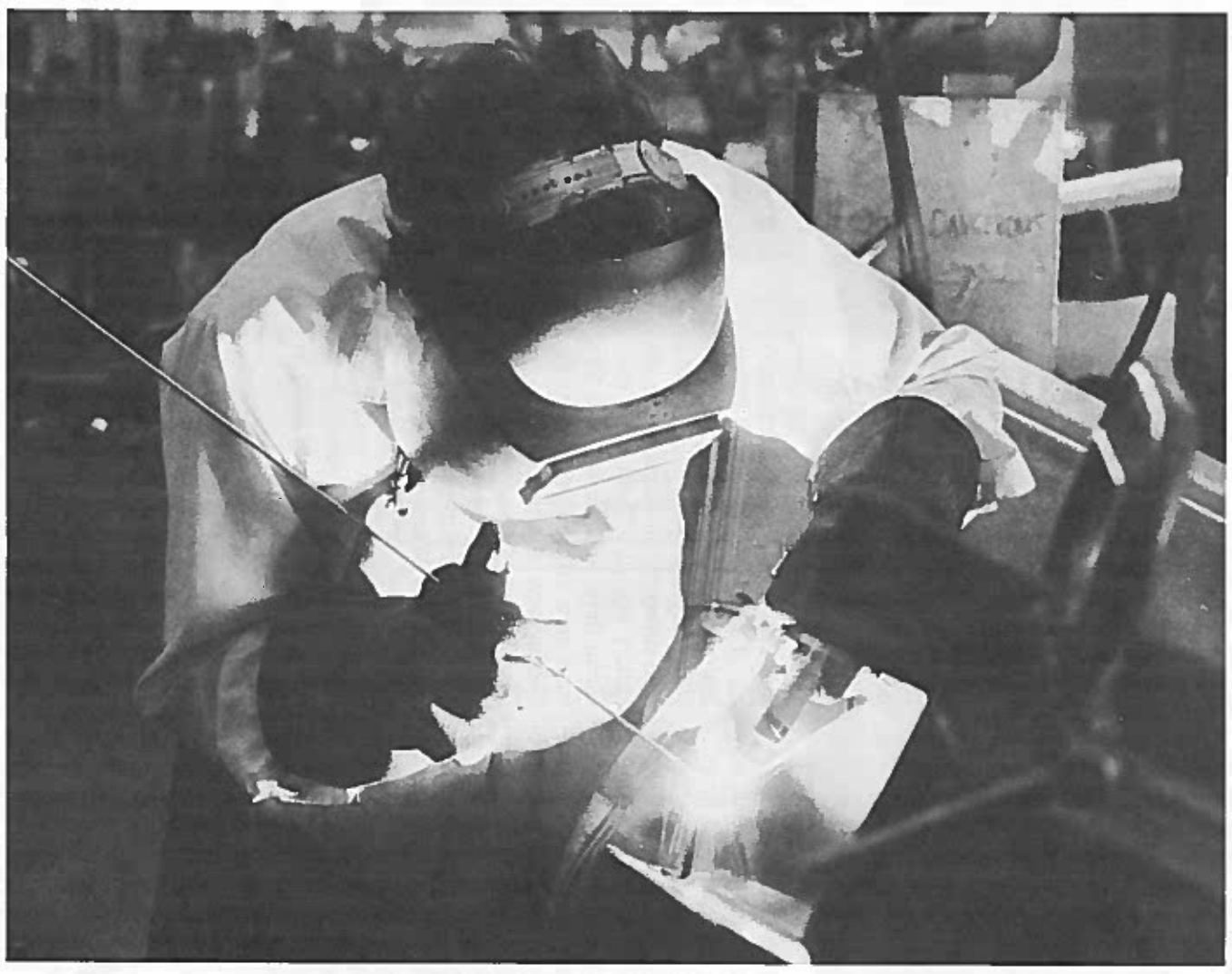
Roy Montana, Mgmt., Calverton, Aircraft Systems
Robert Montusi, Environ. Cont. Des., Bethpage, Aircraft Systems
Richard N. Orr, FTT Tech. Supt., Calverton, Aircraft Systems
William E. Parente, FTT Tech. Supt., Calverton, Aircraft Systems
Michael J. Pepe, Crew Syst./Equip. Integ., Melville, Aircraft Systems
Jerome G. Rainford, Matl. Accounting, Bethpage, Aircraft Systems
Victor C. Resmini, Specifications, Bethpage, Aircraft Systems
Harry J. Ryan Jr., Struct. Sys. Prod. Supt., Calverton, Aircraft Systems

25

Norman A. Beal II, A6/EA6B Ditmco/Fuel, Calverton, Aircraft Systems

Graydon A. Burns, Aircraft Serv., Bethpage, Technical Services
Dennis L. Carter, Software Sys. Proj. Mgmt., Bethpage, Aircraft Systems
Lawrence J. Farrelly, Mgmt. Bethpage, Aircraft Systems
Theodore S. Gordan, Computer Architecture, Melville, Aircraft Systems
Barnett S. Green, Sys. Dev. Integ., Bethpage, Space
Ronald Ibanez, Machine Shop Methods, Bethpage, Aircraft Systems
Joseph F. Jasuta, Maint. Great River, Services
Lawrence E. Johnson, Aircraft Serv., Bethpage, Technical Services
George T. Keefe, Eng., Calverton, Aircraft Systems
Lance R. Kincaid, Mfg. Sch., Bethpage, Aircraft Systems
Lawrence P. Kollender, Bethpage, Grumman International

Joseph R. Kriklava, Plt. Protection, Bethpage, Services
Harry E. Kuhlman, ILS Prog. Mgmt., Melville, Aircraft Systems
Robert W. Lamberson, Prod. Cont., Great River, Electronics Systems
John J. Morgan, Flt. Avionics Systems, Bethpage, Aircraft Systems
Charles F. Motzer, Prototype, Bethpage, Aircraft Systems
Stanley J. Pancir Jr., Commercial Prod. & Sys., Great River, Electronics Systems
Richard A. Petrucci, Assembly Methods, Bethpage, Aircraft Systems
George G. Rooney, Mgmt., Great River, Electronics Systems
Harold J. Sheprow Jr., A/C Prog., Calverton, Aircraft Systems
Louis L. Sokol, ILS Sys. Eng. Mgmt., Bethpage, Aircraft Systems
Russell Yuen, Electronics Systems, Bethpage, Aircraft Systems



On To The Fleet. *In Grumman Olson's Sturgis, Michigan, facility, Faye Rustad welds the front cab of a United Parcel Service Kurbmaster. Grumman Olson has been building these delivery trucks for over 25 years.*

GrummanWorld
August 15, 1986

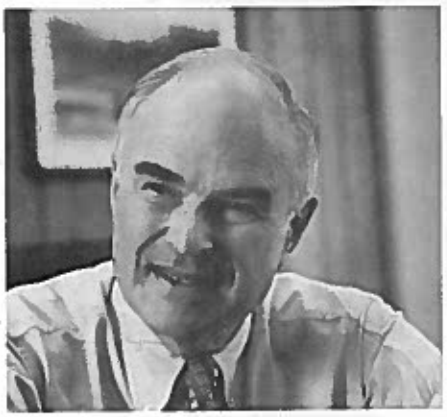
(Photo by Bob Seitles)

Locating A Cure

Curing adhesive materials with heat gives them strong bonding properties — which makes them useful in many aerospace applications. Jane Hansen, a chemist for Grumman's Chemical Engineering Lab, Building 12, Bethpage, tests the curing requirements of several adhesives.

Hansen puts a sample of an adhesive in a pan, and increases the temperature 36 degrees per minute until it reaches 450° F. A differential scanning calorimeter measures the heat given off, which helps determine how the material should be cured.

A Letter From The Chairman



The Office of the Chairman, established this month, is a new way for us to make decisions and focus the company's resources. It's a better way for us to build our future.

This is a busy time for Grumman. We have many new programs — programs we worked long and hard to get — and many of them are still in the development stage. There are other projects a bit further off that we already know we want to be part of. Because of this, we have to use our resources very carefully — our people, our money, and our facilities. We must be extremely efficient in everything we've undertaken, and choose our new opportunities carefully.

The term "Office of the Chairman" is modern business terminology for "senior management team." The office should be essentially interactive with the divisions. As new opportunities or problems surface for the divisions, the division presidents will bring them to John O'Brien, Will Bischoff, Bob Freese, Dan Huebner and myself. The basic questions will always be: Do we have the right people, enough money and adequate facilities to do the job? And, equally important, if the answer to those questions is yes, is that the direction that Grumman should be taking?

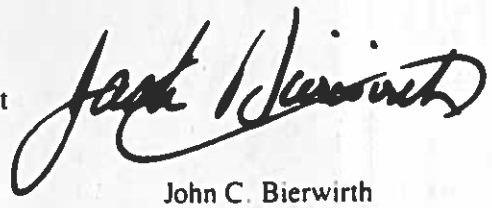
This is a far cry from the semi-autonomous subsidiaries of the past. (Fifteen years ago, we even had outside directors on some of the subsidiary boards.) Those were different days, and the fact that Grumman grew so well proves that the system worked well then.

We are in a very intense period of growth today. Moreover, today's competition for market position is truly fierce. When one adds in the current levels of governmental pressure, we can only conclude that the more cohesive, interactive management structure of today is the right answer.

The new arrangement really just formalizes a framework that has been coming together over the past year. The decision to open the Electronics Systems Division facility in Salisbury, Maryland; to focus our efforts on winning IFTE, JointSTARS and CASS; to sell the ISI unit of the Data Systems Division — all these decisions were made using this method.

This approach will necessarily put more restraints on individual decision making where Grumman's future is at stake, but the positive results should be a great benefit. Decisions on future directions will be cooperative and will have full multi-divisional focus and impact — improving our chances of success.

It should be obvious from the past 12 months, when Grumman won so many major contracts and established so much of its future, that the company has taken the right turn. Our ambitions for the kind of company we want to be are being realized.



John C. Bierwirth
Chairman

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